

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Robert G. Gann

Confirmation No.: 1161

Application No.: 09/626,625

Examiner: H. Safaipoor

Filing Date: July 27, 2000

Group Art Unit: 2622

Title: METHOD AND SYSTEM FOR CALIBRATING A LOOK-DOWN LINEAR ARRAY SCANNER
UTILIZING A FOLDED OPTICAL PATH

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on Dec. 6, 2004.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

() one month	\$120.00
() two months	\$450.00
() three months	\$1020.00
() four months	\$1590.00

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

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By Jody C. Bishop

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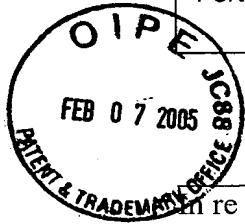
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Robert G. Gann

Application No.: 09/626,625

Confirmation No.: 1161

Filed: July 27, 2000

Art Unit: 2622

For: METHOD AND SYSTEM FOR
CALIBRATING A LOOK-DOWN LINEAR
ARRAY SCANNER UTILIZING A FOLDED
OPTICAL PATH

Examiner: H. Safaipour

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on December 6, 2004, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

- | | |
|------|-----------------------------------|
| I. | Real Party In Interest |
| II | Related Appeals and Interferences |
| III. | Status of Claims |
| IV. | Status of Amendments |
| V. | Summary of Claimed Subject Matter |

VI.	Grounds of Rejection to be Reviewed on Appeal
VII.	Argument
VIII.	Claims
IX.	Evidence
X.	Related Proceedings
Appendix A	Claims

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Hewlett-Packard Development Company, L.P., a Texas Limited Partnership having its principal place of business in Houston, Texas.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 27 claims pending in application, numbered as claims 1, 3-11, and 13-29.

B. Current Status of Claims

1. Claims canceled: 2 and 12
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1, 3-11, and 13-29
4. Claims allowed: 5, 9, 28, and 29
5. Claims objected to: 23 and 25
6. Claims rejected: 1, 3, 4, 6-8, 10, 11, 13-22, 24, 26, and 27

C. Claims On Appeal

The claims on appeal are claims 1, 3, 4, 6-8, 10, 11, 13-22, 24, 26, and 27.

IV. STATUS OF AMENDMENTS

Responsive to a Final Office Action mailed July 14, 2004, Applicant filed an Amendment After Final Rejection on September 8, 2004, in which the only claim amendment presented was to claim 15. The Examiner responded to the Amendment After Final Rejection in an Advisory Action mailed November 4, 2004, and a Supplemental Advisory Action mailed December 1, 2004 (correcting the Period for Reply section of the Advisory Action). Neither the Advisory Action mailed November 4, 2004 nor the Supplemental Advisory Action mailed December 1, 2004 indicated whether Applicant's proposed amendment to claim 15 presented in the Amendment After Final Rejection would be entered. Thus, Applicant's attorney, Jody Bishop, placed a telephone call to the Examiner to inquire in this regard. On January 26, 2005, the Examiner notified Applicant's attorney via telephone that Applicant's proposed amendment to claim 15 would not be entered.

Accordingly, the claims enclosed herein as Appendix A do not incorporate the amendment to claim 15 presented in the Amendment After Final Rejection. However, the claims in Appendix A do incorporate any amendments presented in the Amendment in Response to Non-Final Office Action submitted by Applicant April 14, 2004.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The summary is set forth in several exemplary embodiments. Discussions about elements can be found at least at the cited locations in the specification and drawings.

According to one embodiment, a method of calibrating a look-down digital imaging device comprises focusing on a calibration area within the look-down digital imaging device. Page 5, lines 15-17 of the present application; and *see* calibration area 314 within exemplary look-down digital imaging devices 300 and 400 of FIGURES 3 and 4A-4B of the present application. The method further comprises scanning the calibration area within the look-down digital imaging device to capture image data for the calibration area. Page 5, lines 15-17 of the present application. The method further comprises analyzing the captured image data for the calibration area, and adjusting the imaging of the look-down digital imaging device based on the analysis of the captured image data for the calibration area. Page 14, lines 3-8 of the present application.

According to certain embodiments, the method further comprises determining length of an image path to be used for look-down imaging an external object, wherein focusing on the calibration area comprises adjusting a calibration path used for the scanning of the calibration area to correspond to the length of the image path. *See* page 5, lines 17-20, page 12, lines 18-20, and page 14, line 28 – page 15, line 27 of the present application.

According to one embodiment, a look-down digital imaging device comprises a calibration area arranged within the look-down digital imaging device. Page 5, lines 15-17 of the present application; and *see* calibration area 314 within exemplary look-down digital imaging devices 300 and 400 of FIGURES 3 and 4A-4B of the present application. The look-down digital imaging device is operable to scan the calibration area for calibration of the look-down digital imaging device, and the look-down digital imaging device is operable to achieve an in-focus scan of the calibration area for calibration of the look-down digital imaging device. *Id.*

According to one embodiment, a system for performing digital imaging comprises a look-down digital imaging device that includes means for imaging a target scan area and means for calibrating the look-down digital imaging device. The calibrating means uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area. *See* page 5, lines 17-20, page 12, lines 18-20, and page 14, line 28 – page 15, line 27 of the present application.

According to one embodiment, a method of calibrating a look-down digital imaging device is provided, wherein the calibrating method does not require ever scanning a calibration area that is external to the look-down digital imaging device. Thus, scanning of an external calibration area is not required in order to calibrate the look-down digital imaging device. The method comprises scanning an internal calibration area of the look-down digital imaging device to capture image data for the internal calibration area. Page 5, lines 15-17 of the present application; and *see* calibration area 314 within exemplary look-down digital imaging devices 300 and 400 of FIGURES 3 and 4A-4B of the present application. The method further comprises analyzing the captured image data for the internal calibration area, and adjusting the imaging of the look-down digital imaging device based on the analysis of

the captured image data for the internal calibration area. Page 14, lines 3-8 of the present application.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 3, 4, 7, 8, 10, 11, 13-19, 21, 22, 24, 26, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,760,925 issued to Saund et al. (hereinafter “*Saund*”) in view of U.S. Patent No. 4,513,319 issued to Breimer et al. (hereinafter “*Breimer*”); and

Claims 6 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Saund* in view of *Breimer* and further in view of page 3, lines 8-21 of the specification of the present application.

VII. ARGUMENT

A. Rejections Under 35 U.S.C. § 103(a) over *Saund* in view of *Breimer*

Claims 1, 3, 4, 6, 7, 8, 10, 11, 13-22, 24, 26, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Saund* in view of *Breimer*. Appellant respectfully traverses this rejection as discussed further below.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143. Without conceding any other criteria, Appellant respectfully asserts that the rejection of claims 1, 3, 4, 6, 7, 8, 10, 11, 13-22, 24, 26, and 27 does not satisfy the first and/or third criteria for establishing a prima facie case of obviousness, as discussed further below.

In accordance with 37 C.F.R. § 41.37(c)(1)(viii), Appellant groups arguments for each claim or group of claims believed to be separately patentable under separate subheadings below.

Independent Claim 1 and Dependent Claim 4*A. Applied Combination Fails to Teach or Suggest All Claim Elements*

Independent claim 1 recites in part “focusing on a calibration area within said look-down digital imaging device”.

As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. *See* M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of independent claim 1. That is, the combination of *Saund* and *Breimer* fails to teach or suggest focusing on a calibration area within a look-down digital imaging device.

First, as the Final Office Action admits (on page 3 thereof), *Saund* fails to disclose a calibration area within its look-down imaging system. Instead, *Saund* teaches an external calibration system 14 on the surface of the platform 8.

However, the Final Office Action relies on *Breimer*'s teaching of a device that has an internal calibration area in asserting that it would have been obvious to combine such a device into *Saund*'s system. *Breimer* teaches a method for automatically setting up a television camera 2 in which an external test pattern 1 is present on a test chart in front of the camera and an internal test pattern 18 is present in the camera in the optical path between a camera lens system 4 and a camera pickup arrangement 5. *See* Abstract of *Breimer*. More specifically, *Breimer* provides at column 1, line 52 – column 2, line 6:

According to the invention, a setup method which precedes the normal preparations for scene recording includes two separate steps in which an external and an internal test pattern are used separately. During the setup with the external test pattern, the external test pattern is present on a test chart in front of the camera. During the setup with the internal test pattern, the internal test pattern is present in the camera in the optical path between a lens system of the camera and the pickup arrangement. The separate setups with the external and internal test patterns are effected with a non-blocked optical path and a blocked optical path, respectively in which the lens system is incorporated.

... The correction information associated with the internal test pattern is subtracted from the correction information associated with the external test pattern, and the resulting correction difference information (which relates to at

least the lens system) is stored in a lens memory. The camera memory and lens memory together produce the correction information for correction with minimal error.

In view of the above, *Breimer* teaches that both an external test pattern 1 and an internal test pattern 18 are used. However, *Breimer* fails to teach or suggest focusing on its internal test pattern 18, and thus fails to teach or suggest the above element of independent claim 1.

Breimer makes no mention of focusing, or any mechanism for focusing, on the internal test pattern 18. While *Breimer* provides a lens system 4, such lens system 4 is not used for focusing on the internal test pattern 18, as the above teaching of *Breimer* specifically states that the optical path between the lens system and the camera pickup arrangement is blocked when scanning its internal test pattern. *Breimer* teaches a system in which the internal test pattern 18 is moves into position between lens system 4 and pickup arrangement 5, *see e.g.*, FIGURE 1 and Col. 4, lines 51-66. Thus, lens system 4 is not used for focusing the pickup arrangement 5 on internal test pattern 18.

In response to Appellant's argument that *Breimer* does not teach an in-focus scan of the internal test pattern 18 presented in the Amendment mailed April 14, 2004 responsive to the Office Action mailed January 30, 2004, the Final Office Action (mailed July 14, 2004) asserts that "even though in *Breimer*'s device the optical path between the lens system and the camera pickup arrangement is blocked during scanning of the internal test pattern, such scanning is in-focus due to the close proximity of the test pattern and the camera pickup arrangement." Page 2 of Final Office Action. Appellant fails to understand this statement. First, *Breimer* provides no teaching or suggestion that the close proximity between the test pattern 18 and the camera pickup arrangement 5 results in the test pattern 18 being scanned in focus. Further, the mere fact that the test pattern 18 may be arranged in close proximity to the pickup arrangement 5 in *Breimer* does not necessarily mean that the test pattern 18 is in focus. As an illustrative example, a person may place his/her hand very close to his/her face, but the person's eyes may still not (and may even be unable to) focus on the hand. In *Breimer*, the pickup arrangement 5 may have a focal point at a distance much greater than the proximity of the test pattern 18. It appears from FIGURE 1 that the pickup arrangement 5 has a focal point at the lens system 4 in order to be focused on the images being received

from such lens system 4 during normal operation of the camera 2. It further appears from FIGURE 1 of *Breimer* that when internal test pattern 18 moves upward into optical path 3 (e.g., by rotating about mechanical coupling 20 as indicated in FIGURE 1), internal test pattern 18 is much closer to the pickup arrangement 5 than is lens system 4. Thus, if pickup arrangement 5 has a focal point at lens system 4 (as indicated by the illustration of optical path 3), internal test pattern 18 is not located at such focal point and is thus not imaged in focus by pickup arrangement 5. Thus, merely because internal test pattern 18 is moved into the optical path 3 does not necessarily mean that the internal test pattern 18 is in focus to the pickup arrangement 5, and *Breimer* provides no teaching that the pickup arrangement 5 focuses on the internal test pattern 18 (nor does *Breimer* even identify any mechanism used for so focusing on the internal test pattern 18).

In the Advisory Action mailed November 4, 2004, the Examiner states that “Although *Breimer* (U.S. Patent No. 4,513,319) does not explicitly address the in-focus condition the mere existence of the test pattern suggests in-focus configuration due to inherent properties of the camera.” Page 2 of Advisory Action. Appellant disagrees. The mere existence of an internal test pattern does not suggest that such test pattern is necessarily imaged in focus. Certain calibrations can be performed without requiring that the test pattern be in focus. As an example, the test pattern 18 could consist of a purely white pattern and the pickup arrangement 5 can scan such white pattern without focusing on it and still detect whether the pickup arrangement recognizes the pattern as white. Thus, merely because an internal test pattern 18 is included in *Breimer*’s camera and is imaged by pickup arrangement 5 does not necessarily mean that the internal test pattern 18 is imaged in focus by the pickup arrangement 5. Again, *Breimer* provides no teaching that the pickup arrangement 5 focuses on the internal test pattern 18, and *Breimer* does not identify any mechanism for focusing on the internal test pattern 18 (as mentioned above, the lens system 4 is not used for focusing on the internal test pattern 18). Accordingly, *Breimer* fails to provide any teaching or suggestion that its scan of the internal test pattern 18 is in focus.

In view of the above, neither *Saund* nor *Breimer* teach or suggest at least the above-identified element of independent claim 1. As such, the applied combination of *Saund* and *Breimer* fails to teach or suggest all elements of independent claim 1. Therefore, Appellant respectfully asserts that independent claim 1 is patentable over the applied combination.

B. Lack of Motivation to Combine References

To make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner's initial burden to provide some suggestion or motivation. *See* M.P.E.P. § 2142. The Final Office Action fails to identify proper suggestion or motivation to combine *Saund* and *Breimer*. The Final Office Action asserts on page 3:

Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to combine Breimer's device with that of Saund et al., because, the combination would form a look down imaging apparatus with calibration area within the device in the proper position.

This line of logic does not identify proper motivation for combining *Saund* and *Breimer*. Rather, this is simply a statement that it would be obvious to combine the references because such a combination can be made. It is well settled that the mere fact that references can be combined is not sufficient to establish a prima facie case of obviousness, M.P.E.P. § 2143.01.

Further, the language of the recited motivation is circular in nature, stating that it is obvious to make the combination because it is obvious to achieve the result. In other words, the recited motivation states that it is obvious to combine the internal calibration area of *Breimer* with the look down imaging apparatus of *Saund* because such a combination would result in a look down imaging apparatus with the internal calibration area. Such a statement can always be made for any combination (i.e., it is obvious to combine the references because it would result in the combination). However, this argument fails to identify any motivation (or desire) that would lead one of ordinary skill in the art to make such a combination. That is, the recited motivation fails to identify any motivation for obtaining the resultant combination.

In responding to Appellant's previous arguments regarding lack of motivation to combine *Saund* and *Breimer* in the manner suggested by the Examiner, the Final Office Action further asserts on page 2 thereof that the "examiner disagrees with the applicant, because, both references address calibration procedure, one with external test pattern and the

other with both internal and external test pattern.” Again, this is not a statement of motivation, but is merely a statement that both references address calibration. Merely because the references are both directed to calibration procedures does not provide any motivation for combining their respective teachings in the manner suggested by the Examiner. Indeed, given that *Saund* provides a calibration technique for a look-down digital imaging device, what would motivate one of skill in the art to look to the calibration technique of *Breimer* for calibrating the device of *Saund*?

The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination, M.P.E.P. § 2143.01. Thus, the current Office Action fails to identify proper motivation for making the applied combination, as the motivation must establish the desirability for making the combination. Rather, it appears that the motivation is provided by the disclosure of the present application. The motivation must be provided by the prior art, not by Applicant’s disclosure. Relying on Applicant’s disclosure for piecing together the combination is impermissible hindsight. M.P.E.P. § 2143.01.

In view of the above, proper motivation has not been established for making the combination of *Saund* and *Breimer* as applied in the Final Office Action in rejecting independent claim 1. As such, the rejection of claim 1 is improper.

Dependent claim 4 depends from independent claim 1, and thus inherits the elements of claim 1. As such, claim 4 is patentable at least for the reasons presented above for independent claim 1.

Claim 3

Dependent claim 3 depends from independent claim 1, and thus inherits the elements of claim 1. As such, claim 3 is patentable at least for the reasons presented above for independent claim 1. Additionally, claim 3 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 3 depends from independent claim 1 and further recites “wherein said focusing further comprises: folding the optical path of light reflected from said calibration area for said scanning of said calibration area.”

As described above with claim 1, the Examiner relies upon *Breimer*'s internal test pattern 18 as providing the recited calibration area. However, *Breimer* neither teaches nor suggests folding the optical path of light that is reflected from its internal test pattern for scanning of such internal test pattern. Instead, *Breimer* teaches that the internal test pattern 18 is moveable, such that it can be moved into optical path 3. Thus, folding of the optical path is unnecessary to scan internal test pattern 18 in *Breimer*.

The Final Office Action apparently concedes that *Breimer* fails to teach or suggest the above element of claim 3, but asserts that “folding the optical path of light reflected from scanned area is well known and routinely practiced in the art (Official Notice).” Page 3 of Final Office Action. Thus, the Examiner appears to take Official Notice that folding an optical path of light reflected from a scanned area is well known.

However, it should be noted that claim 3 recites more than merely folding an optical path of light reflected from some scanned area. Claim 3 specifically recites folding the optical path of light reflected “from said calibration area”, which refers to the calibration area recited in claim 1 as being within the look-down digital imaging device. The Final Office Action does not even allege that it is known in the art to fold the optical path of light reflected from a calibration area within a look-down digital imaging device.

In *Breimer* there exist at least two scan areas: 1) the external test pattern 1, and 2) the internal test pattern 18. Nothing teaches or suggests that the optical path of light reflected from either scan area is to be folded, and particularly nothing teaches or suggests that the optical path of light reflected from the internal test pattern 18 is to be folded. Indeed, *Breimer* provides a mechanism for moving the internal test pattern 18 in the optical path 3 to avoid such folding of the optical path. Thus, even though folding of the optical path of light reflected from some scan area may be known in the art (per the Examiner's Official Notice), no teaching or suggestion of folding the particular optical path of light from a calibration area within a look-down digital imaging device, as recited by claim 3, has been provided by the applied combination. Thus, the applied combination fails to teach or suggest all elements of

claim 3, and claim 3 is therefore not obvious under 35 U.S.C. § 103(a) over the applied combination.

B. Lack of Motivation to Combine References

Further, as mentioned above, to make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner's initial burden to provide some suggestion or motivation. *See* M.P.E.P. § 2142. The Final Office Action fails to identify proper suggestion or motivation to combine *Saund*, *Breimer*, and the Examiner's Official Notice.

In rejecting claim 3, page 3 of the Final Office Action asserts:

Regarding claim 3, folding the optical path of light reflected from scanned area is well known and routinely practiced in the art (Official Notice). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to fold the optical path in combined *Saund* and *Breimer*'s device, because, folding the optical path would reduce the size of the apparatus.

The recited motivation is faulty for several reasons. First, it is unclear how folding the optical path of light from the internal test pattern 18 of *Breimer* would achieve the stated desire of reducing the size of the apparatus. For instance, because *Breimer* does not fold the optical path in this manner, an additional mechanism would be required to be implemented to achieve the folded optical path. The Examiner has provided no explanation as to how implementing such a mechanism for folding the optical path would reduce the size of the apparatus. Especially when considering the close proximity of internal test pattern 18 to pickup arrangement 5 that is already present in *Breimer*'s configuration (*see* Response to Arguments on page 2 of Final Office Action), as relied upon by the Examiner in the Final Office Action in rejecting claim 1, it is unclear how, if at all, the size of an apparatus implementing *Breimer*'s configuration would be reduced by including a further mechanism for folding of the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5.

Furthermore, even if some configuration for folding the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5 could somehow reduce the size of *Breimer's* apparatus, no motivation for pursuing such a result is provided in the applied references. For instance, Appellant finds no mention in *Breimer* regarding concern over the size of its camera that would motivate one of ordinary skill in the art to attempt to reduce its size. The mere fact that references (and Official Notice) can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination, M.P.E.P. § 2143.01. Nothing has been identified in the applied art that would motivate one of ordinary skill in the art to pursue folding the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5 in *Breimer* for reducing the size of its camera, particularly when, as described above, it is not readily clear if/how such folding of the optical path of light would even be successful in so reducing the size of the camera.

In view of the above, proper motivation has not been established for making the combination of *Saund*, *Breimer*, and Official Notice as applied in the Final Office Action in rejecting claim 3. As such, the rejection of claim 3 is improper.

Claim 21

Dependent claim 21 depends from independent claim 1, and thus inherits the elements of claim 1. As such, claim 21 is patentable at least for the reasons presented above for independent claim 1. Additionally, claim 21 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 21 depends from 1, and further recites “determining an in-focus imaging path for imaging an object with said look-down digital imaging device, wherein said focusing on said calibration area mimics said in-focus imaging path” (emphasis added). As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. See M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of claim 21. That is, the combination of *Saund* and *Breimer* fails to teach or suggest focusing on a calibration area within a look-down

digital imaging device, wherein the focusing on the calibration area mimics the in-focus imaging path for imaging an object with the look-down digital imaging device.

As mentioned above, *Saund* fails to teach or suggest a calibration area within a look-down digital imaging device. Thus, *Breimer* is relied upon by the Final Office Action as teaching focusing on a calibration area within a device in that *Breimer* teaches imaging of internal test pattern 18 by pickup arrangement 5.

However, *Breimer* fails to teach or suggest “determining an in-focus imaging path for imaging an object ... wherein said focusing on said calibration area mimics said in-focus imaging path” (emphasis added), as recited by claim 21. As described above with claim 1, *Breimer* does not teach or suggest focusing on its internal test pattern 18 at all. Further, *Breimer* does not teach or suggest focusing on such internal test pattern 18 in a manner that mimics a determined in-focus imaging path of an object to be imaged by the camera.

In rejecting claim 21, the Final Office Action merely provides at page 5 thereof that “the arguments analogous to those presented for claims 1 and 15 are applicable to claims 21 and 22.” The rejection of claim 1 does not address the above element of claim 21, as claim 1 does not recite such element. At page 2 of the Final Office Action, the Examiner asserts:

Furthermore, applicant argues that the *Breimer* fails to teach or suggest a calibrating means that uses a calibration path that mimics an imaging path for imaging the scan area. Examiner agrees. However, *Saund et al.* discloses such a device.

Thus, the Examiner appears to agree that *Breimer* fails to teach or suggest “determining an in-focus imaging path for imaging an object ... wherein said focusing on said calibration area mimics said in-focus imaging path” (emphasis added), as recited by claim 21. However, the Examiner appears to assert that *Saund* discloses this element. Of course, *Saund* does not teach or suggest a calibration area that is within its look-down digital imaging device at all. Thus, it certainly fails to teach or suggest focusing on such a calibration area in a manner that mimics a determined in-focus imaging path, as recited by claim 21.

In view of the above, Appellant respectfully submits that claim 21 is not obvious under 35 U.S.C. § 103(a) over the applied combination of *Saund* and *Breimer* because the applied combination fails to teach or suggest all elements of claim 21.

Claim 22

Dependent claim 22 depends from independent claim 1, and thus inherits the elements of claim 1. As such, claim 22 is patentable at least for the reasons presented above for independent claim 1. Additionally, claim 22 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 22 depends from 1, and further recites “determining length of an image path to be used for said look-down imaging an external object, wherein said focusing on said calibration area comprises adjusting a calibration path used for said scanning of said calibration area to correspond to the length of the image path” (emphasis added). As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. See M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of claim 22. That is, the combination of *Saund* and *Breimer* fails to teach or suggest focusing on a calibration area within a look-down digital imaging device, wherein the focusing on the calibration area comprises adjusting a calibration path used for scanning the calibration area to correspond to the length of a determined image path to be used for imaging an external object.

As mentioned above, *Saund* fails to teach or suggest a calibration area within a look-down digital imaging device. Thus, *Breimer* is relied upon by the Final Office Action as teaching focusing on a calibration area within a device in that *Breimer* teaches imaging of internal test pattern 18 by pickup arrangement 5.

However, *Breimer* fails to teach or suggest the above element of claim 22. As described above with claim 1, *Breimer* does not teach or suggest focusing on its internal test pattern 18 at all. Further, *Breimer* does not teach or suggest focusing on such internal test pattern 18 that “comprises adjusting a calibration path used for said scanning of said calibration area to correspond to the length of the image path”, as recited by claim 22.

In rejecting claim 22, the Final Office Action merely provides at page 5 thereof that “the arguments analogous to those presented for claims 1 and 15 are applicable to claims 21 and 22.” The rejection of claim 1 does not address the above element of claim 22, as claim 1 does not recite such element. At page 2 of the Final Office Action, the Examiner asserts:

Furthermore, applicant argues that the *Breimer* fails to teach or suggest a calibrating means that uses a calibration path that mimics an imaging path for imaging the scan area. Examiner agrees. However, *Saund et al.* discloses such a device.

Thus, the Examiner appears to agree that *Breimer* fails to teach or suggest “determining length of an image path to be used for said look-down imaging an external object, wherein said focusing on said calibration area comprises adjusting a calibration path used for said scanning of said calibration area to correspond to the length of the image path” (emphasis added), as recited by claim 22. However, the Examiner appears to assert that *Saund* discloses this element. Of course, *Saund* does not teach or suggest a calibration area that is within its look-down digital imaging device at all. Thus, it certainly fails to teach or suggest focusing on such a calibration area, wherein the focusing comprises adjusting a calibration path used for scanning the calibration area to correspond to the length of a determined image path to be used for imaging an external object, as recited by claim 22.

In view of the above, Appellant respectfully submits that claim 22 is not obvious under 35 U.S.C. § 103(a) over the applied combination of *Saund* and *Breimer* because the applied combination fails to teach or suggest all elements of claim 22.

Independent Claim 7 and Dependent Claims 8, 10, and 11

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Independent claim 7 recites in part “calibration area arranged within said look-down digital imaging device ... wherein said look-down digital imaging device is operable to achieve an in-focus scan of said calibration area for calibration of said look-down digital imaging device” (emphasis added).

As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. See M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of independent claim 7. That is, the combination of *Saund* and *Breimer* fails to teach or suggest focusing on a calibration area with a look-down digital imaging device.

First, as the Final Office Action admits (on page 3 thereof), *Saund* fails to disclose a calibration area within its look-down imaging system. Instead, *Saund* teaches an external calibration system 14 on the surface of the platform 8.

However, the Final Office Action relies on *Breimer*'s teaching of a device that has an internal calibration area in asserting that it would have been obvious to combine such a device into *Saund*'s system. *Breimer* teaches a method for automatically setting up a television camera 2 in which an external test pattern 1 is present on a test chart in front of the camera and an internal test pattern 18 is present in the camera in the optical path between a camera lens system 4 and a camera pickup arrangement 5. *See* Abstract of *Breimer*. More specifically, *Breimer* provides at column 1, line 52 – column 2, line 6:

According to the invention, a setup method which precedes the normal preparations for scene recording includes two separate steps in which an external and an internal test pattern are used separately. During the setup with the external test pattern, the external test pattern is present on a test chart in front of the camera. During the setup with the internal test pattern, the internal test pattern is present in the camera in the optical path between a lens system of the camera and the pickup arrangement. The separate setups with the external and internal test patterns are effected with a non-blocked optical path and a blocked optical path, respectively in which the lens system is incorporated.

... The correction information associated with the internal test pattern is subtracted from the correction information associated with the external test pattern, and the resulting correction difference information (which relates to at least the lens system) is stored in a lens memory. The camera memory and lens memory together produce the correction information for correction with minimal error.

In view of the above, *Breimer* teaches that both an external test pattern 1 and an internal test pattern 18 are used. However, *Breimer* fails to teach or suggest that its device is operable to achieve an in-focus scan of internal test pattern 18, and thus fails to teach or suggest the above element of independent claim 7.

Breimer makes no mention of focusing, or any mechanism for focusing, on the internal test pattern 18. While *Breimer* provides a lens system 4, such lens system 4 is not used for focusing on the internal test pattern 18, as the above teaching of *Breimer* specifically states that the optical path between the lens system and the camera pickup arrangement is blocked when scanning its internal test pattern. *Breimer* teaches a system in which the internal test pattern 18 is moves into position between lens system 4 and pickup arrangement 5, *see e.g.*, FIGURE 1 and Col. 4, lines 51-66. Thus, lens system 4 is not used for focusing the pickup arrangement 5 on internal test pattern 18.

In response to Appellant's argument that *Breimer* does not teach that its device is operable to achieve an in-focus scan of the internal test pattern 18 presented in the Amendment mailed April 14, 2004 responsive to the Office Action mailed January 30, 2004, the Final Office Action (mailed July 14, 2004) asserts that "even though in *Breimer*'s device the optical path between the lens system and the camera pickup arrangement is blocked during scanning of the internal test pattern, such scanning is in-focus due to the close proximity of the test pattern and the camera pickup arrangement." Page 2 of Final Office Action. Appellant fails to understand this statement. First, *Breimer* provides no teaching or suggestion that the close proximity between the test pattern 18 and the camera pickup arrangement 5 results in the test pattern 18 being scanned in focus. Further, the mere fact that the test pattern 18 may be arranged in close proximity to the pickup arrangement 5 in *Breimer* does not necessarily mean that the test pattern 18 is in focus. As an illustrative example, a person may place his/her hand very close to his/her face, but the person's eyes may still not (and may even be unable to) focus on the hand. In *Breimer*, the pickup arrangement 5 may have a focal point at a distance much greater than the proximity of the test pattern 18. It appears from FIGURE 1 that the pickup arrangement 5 has a focal point at the lens system 4 in order to be focused on the images being received from such lens system 4 during normal operation of the camera 2. It further appears from FIGURE 1 of *Breimer* that when internal test pattern 18 moves upward into optical path 3 (e.g., by rotating about mechanical coupling 20 as indicated in FIGURE 1), internal test pattern 18 is much closer to the pickup arrangement 5 than is lens system 4. Thus, if pickup arrangement 5 has a focal point at lens system 4 (as indicated by the illustration of optical path 3), internal test pattern 18 is not located at such focal point and is thus not imaged in focus by pickup arrangement 5. Thus, merely because internal test pattern 18 is moved into the optical path 3 does not necessarily mean that the internal test pattern 18 is in focus to the pickup arrangement 5, and *Breimer* provides no teaching that the pickup arrangement 5 focuses on the internal test pattern 18 (nor does *Breimer* even identify any mechanism used for so focusing on the internal test pattern 18).

In the Advisory Action mailed November 4, 2004, the Examiner states that "Although *Breimer* (U.S. Patent No. 4,513,319) does not explicitly address the in-focus condition the mere existence of the test pattern suggests in-focus configuration due to inherent properties of the camera." Page 2 of Advisory Action. Appellant disagrees. The mere existence of an

internal test pattern does not suggest that such test pattern is necessarily imaged in focus. Certain calibrations can be performed without requiring that the test pattern be in focus. As an example, the test pattern 18 could consist of a purely white pattern and the pickup arrangement 5 can scan such white pattern without focusing on it and still detect whether the pickup arrangement recognizes the pattern as white. Thus, merely because an internal test pattern 18 is included in *Breimer's* camera and is imaged by pickup arrangement 5 does not necessarily mean that the internal test pattern 18 is imaged in focus by the pickup arrangement 5. Again, *Breimer* provides no teaching that the pickup arrangement 5 focuses on the internal test pattern 18, and *Breimer* does not identify any mechanism for focusing on the internal test pattern 18 (as mentioned above, the lens system 4 is not used for focusing on the internal test pattern 18). Accordingly, *Breimer* fails to provide any teaching or suggestion that its device is operable to achieve an in-focus scan of the internal test pattern 18.

In view of the above, neither *Saund* nor *Breimer* teach or suggest at least the above-identified element of independent claim 7. As such, the applied combination of *Saund* and *Breimer* fails to teach or suggest all elements of independent claim 7. Therefore, Appellant respectfully asserts that independent claim 7 is patentable over the applied combination.

B. Lack of Motivation to Combine References

To make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner's initial burden to provide some suggestion or motivation. *See* M.P.E.P. § 2142. The Final Office Action fails to identify proper suggestion or motivation to combine *Saund* and *Breimer*. The Final Office Action asserts on page 3:

Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to combine *Breimer's* device with that of *Saund et al.*, because, the combination would form a look down imaging apparatus with calibration area within the device in the proper position.

This line of logic does not identify proper motivation for combining *Saund* and *Breimer*. Rather, this is simply a statement that it would be obvious to combine the references because such a combination can be made. It is well settled that the mere fact that

references can be combined is not sufficient to establish a prima facie case of obviousness, M.P.E.P. § 2143.01.

Further, the language of the recited motivation is circular in nature, stating that it is obvious to make the combination because it is obvious to achieve the result. In other words, the recited motivation states that it is obvious to combine the internal calibration area of *Breimer* with the look down imaging apparatus of *Saund* because such a combination would result in a look down imaging apparatus with the internal calibration area. Such a statement can always be made for any combination (i.e., it is obvious to combine the references because it would result in the combination). However, this argument fails to identify any motivation (or desire) that would lead one of ordinary skill in the art to make such a combination. That is, the recited motivation fails to identify any motivation for obtaining the resultant combination.

In responding to Appellant's previous arguments regarding lack of motivation to combine *Saund* and *Breimer* in the manner suggested by the Examiner, the Final Office Action further asserts on page 2 thereof that the "examiner disagrees with the applicant, because, both references address calibration procedure, one with external test pattern and the other with both internal and external test pattern." Again, this is not a statement of motivation, but is merely a statement that both references address calibration. Merely because the references are both directed to calibration procedures does not provide any motivation for combining their respective teachings in the manner suggested by the Examiner. Indeed, given that *Saund* provides a calibration technique for a look-down digital imaging device, what would motivate one of skill in the art to look to the calibration technique of *Breimer* for calibrating the device of *Saund*?

The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination, M.P.E.P. § 2143.01. Thus, the current Office Action fails to identify proper motivation for making the applied combination, as the motivation must establish the desirability for making the combination. Rather, it appears that the motivation is provided by the disclosure of the present application. The motivation must be provided by the prior art, not by Applicant's

disclosure. Relying on Applicant's disclosure for piecing together the combination is impermissible hindsight. M.P.E.P. § 2143.01.

In view of the above, proper motivation has not been established for making the combination of *Saund* and *Breimer* as applied in the Final Office Action in rejecting independent claim 7. As such, the rejection of claim 7 is improper.

Dependent claims 8, 10, and 11 each depends either directly or indirectly from independent claim 7, and thus each inherits the elements of claim 7. As such, claims 8, 10, and 11 are patentable at least for the reasons presented above for independent claim 7.

Claims 13-14

Dependent claims 13-14 depend either directly or indirectly from independent claim 7, and thus each inherit the elements of claim 7. As such, claims 13-14 are patentable at least for the reasons presented above for independent claim 7. Additionally, claims 13-14 include further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 13 depends from claim 7 and further recites "wherein the optical path of light reflected from said calibration area during a scan of said calibration area is folded."

As described above with claim 7, the Examiner relies upon *Breimer*'s internal test pattern 18 as providing the recited calibration area. However, *Breimer* neither teaches nor suggests folding the optical path of light that is reflected from its internal test pattern for scanning of such internal test pattern. Instead, *Breimer* teaches that the internal test pattern 18 is moveable, such that it can be moved into optical path 3. Thus, folding of the optical path is unnecessary during scanning of internal test pattern 18 in *Breimer*.

The Final Office Action apparently concedes that *Breimer* fails to teach or suggest the above element of claim 13, but asserts that "folding the optical path of light reflected from scanned area is well known and routinely practiced in the art (Official Notice)." See rejection of claim 3 at Page 3 of Final Office Action, which is referenced at page 4 of Final Office

Action in rejecting claim 13. Thus, the Examiner appears to take Official Notice that folding an optical path of light reflected from a scanned area is well known.

However, it should be noted that claim 13 recites more than merely folding an optical path of light reflected from some scanned area. Claim 13 specifically recites that the optical path of light reflected from the calibration area, which is recited in claim 7 as being arranged within the look-down digital imaging device, is folded. The Final Office Action does not even allege that it is known in the art to fold the optical path of light reflected from a calibration area within a look-down digital imaging device.

In *Breimer* there exist at least two scan areas: 1) the external test pattern 1, and 2) the internal test pattern 18. Nothing teaches or suggests that the optical path of light reflected from either scan area is to be folded, and particularly nothing teaches or suggests that the optical path of light reflected from the internal test pattern 18 is to be folded. Indeed, *Breimer* provides a mechanism for moving the internal test pattern 18 in the optical path 3 to avoid such folding of the optical path. Thus, even though folding of the optical path of light reflected from some scan area may be known in the art (per the Examiner's Official Notice), no teaching or suggestion of folding the particular optical path of light from a calibration area within a look-down digital imaging device has been provided by the applied combination. Thus, the applied combination fails to teach or suggest all elements of claim 13, and claim 13 is therefore not obvious under 35 U.S.C. § 103(a) over the applied combination.

B. Lack of Motivation to Combine References

Further, as mentioned above, to make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner's initial burden to provide some suggestion or motivation. See M.P.E.P. § 2142. The Final Office Action fails to identify proper suggestion or motivation to combine *Saund*, *Breimer*, and the Examiner's Official Notice.

In rejecting claim 13 at page 4 of the Final Office Action, the Examiner references the rejection of claim 3. In rejecting claim 3, page 3 of the Final Office Action asserts:

Regarding claim 3, folding the optical path of light reflected from scanned area is well known and routinely practiced in the art (Official Notice). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to fold the optical path in combined Saund and Breimer's device, because, folding the optical path would reduce the size of the apparatus.

The recited motivation is faulty for several reasons. First, it is unclear how folding the optical path of light from the internal test pattern 18 of *Breimer* would achieve the stated desire of reducing the size of the apparatus. For instance, because *Breimer* does not fold the optical path in this manner, an additional mechanism would be required to be implemented to achieve the folded optical path. The Examiner has provided no explanation as to how implementing such a mechanism for folding the optical path would reduce the size of the apparatus. Especially when considering the close proximity of internal test pattern 18 to pickup arrangement 5 that is already present in *Breimer*'s configuration, as relied upon by the Examiner in the Final Office Action in rejecting claim 1 (*see* Response to Arguments on page 2 of Final Office Action), it is unclear how, if at all, the size of an apparatus implementing *Breimer*'s configuration would be reduced by including a further mechanism for folding of the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5.

Furthermore, even if some configuration for folding the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5 could somehow reduce the size of *Breimer*'s apparatus, no motivation for pursuing such a result is provided in the applied references. For instance, Appellant finds no mention in *Breimer* regarding concern over the size of its camera that would motivate one of ordinary skill in the art to attempt to reduce its size. The mere fact that references (and Official Notice) can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination, M.P.E.P. § 2143.01. Nothing has been identified in the applied art that would motivate one of ordinary skill in the art to pursue folding the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5 in *Breimer* for reducing the size of its camera, particularly when, as described above, it is not readily clear if/how such folding of the optical path of light would even be successful in so reducing the size of the camera.

In view of the above, proper motivation has not been established for making the combination of *Saund*, *Breimer*, and Official Notice as applied in the Final Office Action in rejecting claim 13. As such, the rejection of claim 13 is improper.

Claim 14 depends from claim 13 and is patentable at least for the reasons discussed above for claim 13.

Claim 24

Dependent claim 24 depends from independent claim 7, and thus inherits the elements of claim 7. As such, claim 24 is patentable at least for the reasons presented above for independent claim 7. Additionally, claim 24 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 24 depends from 7, and further recites “wherein said in-focus scan of said calibration uses a calibration path that mimics an in-focus imaging path for scanning an external object” (emphasis added). As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. *See* M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of claim 24. That is, the combination of *Saund* and *Breimer* fails to teach or suggest performing an in-focus scan of a calibration area within a look-down digital imaging device using a calibration path that mimics an in-focus imaging path for scanning an external object.

In rejecting claim 24, the Final Office Action merely provides at page 5 thereof that “the arguments analogous to those presented for claim 1 are applicable to claim 24.” However, the rejection of claim 1 does not address the above element of claim 24, as claim 1 does not recite such element. The combination of *Saund* and *Breimer* fails to teach or suggest the above element of claim 24, as discussed below.

As mentioned above, *Saund* fails to teach or suggest a calibration area within a look-down digital imaging device. Because *Saund* fails to teach or suggest a calibration area within a look-down digital imaging device, it certain fails to teach or suggest an in-focus scan

of such calibration area using a calibration path that mimics an in-focus imaging path for scanning an external object, as recited by claim 24.

Because *Saund* fails to teach or suggest a calibration area within a look-down digital imaging device, the Final Office Action relies on *Breimer* as teaching an in-focus scan of a calibration area within a device in that *Breimer* teaches imaging of internal test pattern 18 by pickup arrangement 5. However, *Breimer* fails to teach or suggest using “a calibration path that mimics an in-focus imaging path for scanning an external object”, as recited by claim 24. As described above with claim 7, *Breimer* does not teach or suggest focusing on its internal test pattern 18 at all. Further, *Breimer* does not teach or suggest performing an in-focus scan of such internal test pattern 18 using a calibration path that mimics an in-focus imaging path for scanning an external object.

In view of the above, Appellant respectfully submits that claim 24 is not obvious under 35 U.S.C. § 103(a) over the applied combination of *Saund* and *Breimer* because the applied combination fails to teach or suggest all elements of claim 24.

Independent Claim 15 and Dependent Claim 16

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Independent claim 15 recites “a look-down digital imaging device that includes means for imaging a target scan area and means for calibrating said look-down digital imaging device, wherein the calibrating means uses a calibration path that mimics an imaging path to be used by said look-down digital imaging device for imaging said target scan area” (emphasis added).

As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. See M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of independent claim 15. That is, the combination of *Saund* and *Breimer* fails to teach or suggest mimicking an image path to be used for imaging a target scan area when calibrating a look-down digital imaging device.

First, the Final Office Action fails to establish a prima facie case of obviousness. The Final Office Action concedes (on page 2 thereof) that *Breimer* fails to teach or suggest a calibrating means that uses a calibration path that mimics an imaging path for imaging the scan area. However, the Final Office Action relies on *Saund* as teaching this element of claim 15, *see* rejection of claim 15 on page 4 of the Final Office Action. In this rejection of claim 15, the Examiner fails to identify any element of claim 15 that is not taught by *Saund*, and thus fails to identify what element, if any, the Examiner is relying on *Breimer* as supplying. Further, the Examiner has failed not only to indicate the element(s) that *Saund* lacks and for which *Breimer* is relied upon as supplying, but has also failed to state any motivation for combining *Breimer* and *Saund* as for claim 15. Thus, the rejection of claim 15 under 35 U.S.C. § 103(a) over *Saund* and *Breimer* fails to satisfy the test for obviousness as articulated by the United States Supreme Court in *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

The United States Supreme Court in *Graham v. John Deere Co.* set forth the factual inquiries which must be considered in applying the statutory test: (1) determining of the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; and (3) resolving the level of ordinary skill in the pertinent art. “Patent examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case.” M.P.E.P. § 2141 (emphasis in original). Further, “[o]ffice policy is to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. 103.” M.P.E.P. § 2141.

Accordingly, when making a rejection under 35 U.S.C. § 103(a), M.P.E.P. § 706.02(j) directs the Examiner to set forth in the Office action: (1) the relevant teachings of the prior art relied upon; (2) the difference or differences in the claim over the applied references; (3) the proposed modification of the applied references necessary to arrive at the claimed subject matter; and (4) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification. As indicated above, in rejecting claim 15, the Final Office Action fails to identify any teachings of *Breimer* that are relied upon, fails to identify any differences in the claim over the *Saund* reference, and fails to provide any explanation why one of ordinary skill in the art at the time

the invention was made would have been motivated to combine *Saund* and *Breimer*. Instead, while indicated as being rejected under 35 U.S.C. § 103(a) over *Saund* and *Breimer*, the Examiner appears to actually allege that claim 15 is anticipated by *Saund* under 35 U.S.C. § 102.

Further, the combination of *Saund* and *Breimer* fails to teach or suggest all elements of claim 15, as discussed further below, and thus fails to render this claim unpatentable under 35 U.S.C. § 103(a). Again, the Final Office Action concedes that *Breimer* fails to teach the above element of claim 15, *see* page 2 of the Final Office Action. Further, contrary to the assertion in the Final Office Action, *Saund* also fails to teach or suggest this element. Claim 15 recites in part that “the calibrating means uses a calibration path that mimics an imaging path to be used by said look-down digital imaging device for imaging said target scan area” (emphasis added). *Saund* does not teach a calibrating means that uses a calibration path that mimics an imaging path to be used by its look-down digital imaging device for imaging a target scan area, but rather the calibration of *Saund* uses the actual imaging path to be used by its look-down digital imaging device for imaging target scan area.

Saund teaches, with reference to its Figures 1 and 4, a system 4 in which a document 10 to be scanned by a look-down digital imaging device 20 is placed on a platform 8. Before scanning such document 10, a calibration system 14 is used for calibrating the look-down digital imaging device 20. The calibration system 14 includes marks 15 on the platform 8 and uses a calibration object 18 that is placed on the platform 8. Thus, in calibrating the look-down digital imaging device, *Saund* scans a calibration object 18 and marks 15 that are arranged on the platform 8, just as a document 10 to be imaged is to be placed. *See e.g.*, Figures 1 and 4 of *Saund*, Col. 5, line 61 –Col. 6, line 5 of *Saund*, Col. 6, lines 55-58 of *Saund*, Col. 6, lines 64-66 of *Saund* (“When invoking the calibration system 14, either calibration object 18 or movable tabs 16 are put in place”), Col. 7, lines 35-48 of *Saund*, and Col. 8, lines 24-61 of *Saund*.

Accordingly, *Saund*’s calibration method uses the same imaging path for both calibration and imaging of a document (or target scan area). *Saund* does not teach or suggest using a calibration path that mimics the imaging path, but instead teaches configuring platform 8 to include marks 15 and object 18 such that the same path can be used for

calibration as will be used for imaging a document arranged on platform 8. That is, in *Saund* the path from the imaging device 20 to the platform 8 is used in both calibration and actual imaging of a document, rather than mimicking such path during calibration as recited by claim 15.

In view of the above, neither *Saund* nor *Breimer* teach or suggest at least the above-identified element of independent claim 15. As such, the applied combination of *Saund* and *Breimer* fails to teach or suggest all elements of independent claim 15. Therefore, Appellant respectfully asserts that independent claim 15 is patentable over the applied combination.

B. Lack of Motivation to Combine References

To make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner's initial burden to provide some suggestion or motivation. See M.P.E.P. § 2142. The Final Office Action fails to identify proper suggestion or motivation to combine *Saund* and *Breimer* in rejecting claim 15. Indeed, as mentioned above, the Final Office Action fails to even identify any portion of *Breimer* that is relied upon in making the rejection, and further fails to state any motivation for combining *Breimer* with *Saund*, as the rejection of claim 15 appears to rely solely on *Saund*.

In view of the above, proper motivation has not been established for making the combination of *Saund* and *Breimer* as applied in the Final Office Action in rejecting independent claim 15. As such, the rejection of claim 15 is improper.

Dependent claim 16 depends from independent claim 15, and thus inherits the elements of claim 15. As such, claim 16 is patentable at least for the reasons presented above for independent claim 15.

Claim 17

Dependent claim 17 depends from independent claim 15, and thus inherits the elements of claim 15. As such, claim 17 is patentable at least for the reasons presented above

for independent claim 15. Additionally, claim 17 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 17 recites “wherein said means for calibrating includes a calibration area within said look-down digital imaging device” (emphasis added).

As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. *See* M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of claim 17. That is, the combination of *Saund* and *Breimer* fails to teach or suggest that the means for calibrating, which as recited by claim 15 uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area, includes a calibration area within the look-down digital imaging device.

In rejecting claim 17, the Final Office Action asserts (on page 5 thereof) that “arguments analogous to those presented for claim 1 are applicable to claims 17 and 18”. However, in rejecting claim 1, the Final Office Action relies on the internal test pattern of *Breimer* as providing a calibration area within the device. In rejecting claim 15, from which claim 17 depends, the Final Office Action asserts that *Saund* provides the means for calibrating, which as recited by claim 15 uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area. Claim 17 further recites that the means for calibrating of claim 15 further includes a calibration area within the look-down digital imaging device. Thus, it appears that the Final Office Action relies upon *Saund* as providing the means for calibrating in rejecting claim 15, but then appears to rely on *Breimer* as providing the means for calibrating in rejecting claim 17. Thus, the Final Office Action is not consistent as the prior art teaching relied upon as supplying the means for calibrating from one claim to the next.

As discussed above with claim 15, the Final Office Action concedes (on page 2 thereof) that *Breimer* fails to disclose the means for calibrating that uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area. Thus, it is inconsistent for the Final Office Action to concede that

Breimer does not disclose the recited means for calibrating with regard to independent claim 15, but then assert that *Breimer* does disclose such means for calibrating in claim 17, which depends from claim 15. In any case, while *Breimer* discloses an internal test pattern, it fails to teach or suggest such internal test pattern as being included in a means for calibrating that uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area.

And, as further discussed above with claim 15, *Saund* also fails to teach or suggest a means for calibrating that uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area. Further, *Saund* does not teach or suggest that its calibrating means includes a calibration area within the look-down digital imaging device.

In view of the above, neither *Saund* nor *Breimer* teach or suggest the recited means for calibrating that uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area (per claim 15) and that includes a calibration area within the look-down digital imaging device (per claim 17). As such, the applied combination of *Saund* and *Breimer* fails to teach or suggest all elements of claim 17. Therefore, Appellant respectfully asserts that claim 17 is patentable over the applied combination.

B. Lack of Motivation to Combine References

Further, to make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner's initial burden to provide some suggestion or motivation. *See* M.P.E.P. § 2142. In rejecting claim 17, the Final Office Action appears to allege that it would have been obvious to one of ordinary skill in the art to implement the internal test pattern of *Breimer* within the calibration system of *Saund*. However, no motivation has been identified in the Final Office Action for making this combination in rejecting claim 17.

For instance, the Final Office Action asserts that *Saund* teaches a calibration system that uses a calibration path that mimics an imaging path to be used by the look-down digital

imaging device for imaging the target scan area. As discussed above with claim 15, *Saund's* calibration system does not use a calibration path that mimics the imaging path, but instead the calibration path and imaging path are the same. In any event, the calibration system of *Saund* performs its calibration based on imaging an external object. The Final Office Action relies upon this imaging of the external object as providing the means for calibrating recited in claim 15.

No motivation has been identified for the means for calibrating of *Saund* (which the Final Office Action asserts mimics the imaging path) is to include a calibration area within the look-down digital imaging device, such as the internal test pattern of *Breimer*. Again, *Breimer* does not teach or suggest using its internal test pattern for mimicking an imaging path, as the Final Office Action concedes (*see* page 2 thereof). Thus, why would the calibration means that uses a calibration path that mimics an imaging path, which the Final Office Action asserts is disclosed by *Saund's* calibration system, include an internal test pattern as taught by *Breimer*? No motivation exists for such a combination because the internal test pattern of *Breimer* is not disclosed as being included in a calibrating means that uses a calibration path that mimics an imaging path; and to the extent that *Saund's* calibration system provides a calibrating means that uses a calibration path that mimics an imaging path (which it does not), such a calibrating means would have no use for an internal test pattern.

Thus, it appears that the motivation is provided by the disclosure of the present application. That is, in rejecting claim 17, the Examiner is merely piecing together the elements of *Saund* and *Breimer* using the Applicant's disclosure as a blueprint, and no motivation for making such a combination exists without reliance upon Applicant's disclosure. To properly combine the references, the motivation for doing so must be provided by the prior art, not by Applicant's disclosure. Relying on Applicant's disclosure for piecing together the combination is impermissible hindsight. M.P.E.P. § 2143.01.

In view of the above, proper motivation has not been established for making the combination of *Saund* and *Breimer* as applied in the Final Office Action in rejecting claim 17. As such, the rejection of claim 17 is improper.

Claim 18

Dependent claim 18 depends from claim 17, which depends from independent claim 15, and thus claim 18 inherits the elements of claims 17 and 15. As such, claim 18 is patentable at least for the reasons presented above for claims 17 and 15. Additionally, claim 18 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 18 recites “wherein said means for calibrating further includes means for focusing said imaging means on said calibration area” (emphasis added).

As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. *See* M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of claim 18. That is, the combination of *Saund* and *Breimer* fails to teach or suggest that the means for calibrating, which uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area (as recited by claim 15) and which includes a calibration area within the look-down digital imaging device (as recited by claim 17), further includes means for focusing the imaging means on the calibration area.

In rejecting claim 18, the Final Office Action asserts (on page 5 thereof) that “arguments analogous to those presented for claim 1 are applicable to claims 17 and 18”. However, in rejecting claim 1, the Final Office Action relies on the internal test pattern of *Breimer* as providing a calibration area within the device and asserts that *Breimer*’s calibration system includes a means for focusing on such internal test pattern. However, as discussed above with independent claim 7, *Breimer* does not teach or suggest any mechanism for focusing on its internal test pattern.

Further, the calibrating means of *Breimer*’s system does not, as the Final Office Action concedes at page 2 thereof, use a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area. In rejecting claim 15, the Final Office Action asserts that *Saund* provides the means for calibrating. However, *Saund* not only fails to teach or suggest that its calibrating means includes a

calibration area within the look-down digital imaging device, but it certainly fails to teach or suggest a means for focusing on such a calibration area.

In view of the above, neither *Saund* nor *Breimer* teach or suggest the recited means for calibrating that uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area (per claim 15) and that includes a calibration area within the look-down digital imaging device (per claim 17) and that further includes a means for focusing the imaging means on the calibration area (per claim 18). As such, the applied combination of *Saund* and *Breimer* fails to teach or suggest all elements of claim 18. Therefore, Appellant respectfully asserts that claim 18 is patentable over the applied combination.

B. Lack of Motivation to Combine References

Further, to make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner's initial burden to provide some suggestion or motivation. *See* M.P.E.P. § 2142. In rejecting claim 18, the Final Office Action appears to allege that it would have been obvious to one of ordinary skill in the art to implement the internal test pattern of *Breimer* within the calibration system of *Saund*. However, no motivation has been identified in the Final Office Action for making this combination in rejecting claim 18.

In view of the above, proper motivation has not been established for making the combination of *Saund* and *Breimer* as applied in the Final Office Action in rejecting claim 18. As such, the rejection of claim 18 is improper.

Claim 19

Dependent claim 19 depends from claim 17, which depends from independent claim 15, and thus claim 19 inherits the elements of claims 17 and 15. As such, claim 19 is patentable at least for the reasons presented above for claims 17 and 15. Additionally, claim 19 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 19 recites “wherein said means for calibrating further includes means for folding the optical path of light reflected from said calibration area” (emphasis added).

As mentioned above, to make a proper 35 U.S.C. § 103(a) rejection, the applied art must teach or suggest all the claim limitations. See M.P.E.P. §2143. The combination of *Saund* and *Breimer* does not teach or suggest at least the above limitation of claim 19. That is, the combination of *Saund* and *Breimer* fails to teach or suggest that the means for calibrating, which uses a calibration path that mimics an imaging path to be used by the look-down digital imaging device for imaging the target scan area (as recited by claim 15) and which includes a calibration area within the look-down digital imaging device (as recited by claim 17), further includes means for folding the optical path of light reflected from said calibration area.

In rejecting claim 19, the Final Office Action asserts (on page 5 thereof) that “arguments analogous to those presented for claim 3 are applicable to claim 19”. As described above with claim 17, the Examiner relies upon *Breimer*’s internal test pattern 18 as providing the recited calibration area within the look-down digital imaging device. However, *Breimer* neither teaches nor suggests folding the optical path of light that is reflected from its internal test pattern for scanning of such internal test pattern. Instead, *Breimer* teaches that the internal test pattern 18 is moveable, such that it can be moved into optical path 3. Thus, folding of the optical path is unnecessary to scan internal test pattern 18 in *Breimer*.

The Final Office Action apparently concedes that *Breimer* fails to teach or suggest the above element of claim 19, but asserts that “folding the optical path of light reflected from scanned area is well known and routinely practiced in the art (Official Notice).” Page 3 of Final Office Action. Thus, the Examiner appears to take Official Notice that folding an optical path of light reflected from a scanned area is well known.

However, it should be noted that claim 19 recites more than merely folding an optical path of light reflected from some scanned area. Claim 19 specifically recites a means for folding the optical path of light reflected “from said calibration area”, which refers to the calibration area recited in claim 17 as being within the look-down digital imaging device.

The Final Office Action does not even allege that it is known in the art to fold the optical path of light reflected from a calibration area within a look-down digital imaging device.

In *Breimer* there exists at least two scan areas: 1) the external test pattern 1, and 2) the internal test pattern 18. Nothing teaches or suggests that the optical path of light reflected from either scan area is to be folded, and particularly nothing teaches or suggests that the optical path of light reflected from the internal test pattern 18 is to be folded. Indeed, *Breimer* provides a mechanism for moving the internal test pattern 18 in the optical path 3 to avoid such folding of the optical path. Thus, even though folding of the optical path of light reflected from some scan area may be known in the art (per the Examiner's Official Notice), no teaching or suggestion of folding the particular optical path of light from a calibration area within a look-down digital imaging device, as recited by claim 19, has been provided by the applied combination. Thus, the applied combination fails to teach or suggest all elements of claim 19, and claim 19 is therefore not obvious under 35 U.S.C. § 103(a) over the applied combination.

B. Lack of Motivation to Combine References

Further, as mentioned above, to make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner's initial burden to provide some suggestion or motivation. *See* M.P.E.P. § 2142. The Final Office Action fails to identify proper suggestion or motivation to combine *Saund*, *Breimer*, and the Examiner's Official Notice.

In rejecting claim 19, the Final Office Action refers to the rejection of claim 3, *see* page 5 of the Final Office Action. In rejecting claim 3, page 3 of the Final Office Action asserts:

Regarding claim 3, folding the optical path of light reflected from scanned area is well known and routinely practiced in the art (Official Notice). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to fold the optical path in combined *Saund* and *Breimer*'s device, because, folding the optical path would reduce the size of the apparatus.

The recited motivation is faulty for several reasons. First, it is unclear how folding the optical path of light from the internal test pattern 18 of *Breimer* would achieve the stated desire of reducing the size of the apparatus. For instance, because *Breimer* does not fold the optical path in this manner, an additional mechanism would be required to be implemented to achieve the folded optical path. The Examiner has provided no explanation as to how implementing such a mechanism for folding the optical path would reduce the size of the apparatus. Especially when considering the close proximity of internal test pattern 18 to pickup arrangement 5 that is already present in *Breimer's* configuration (see Response to Arguments on page 2 of Final Office Action), as relied upon by the Examiner in the Final Office Action in rejecting claim 1, it is unclear how, if at all, the size of an apparatus implementing *Breimer's* configuration would be reduced by including a further means for folding of the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5.

Furthermore, even if some configuration for folding the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5 could somehow reduce the size of *Breimer's* apparatus, no motivation for pursuing such a result is provided in the applied references. For instance, Appellant finds no mention in *Breimer* regarding concern over the size of its camera that would motivate one of ordinary skill in the art to attempt to reduce its size in this manner. The mere fact that references (and Official Notice) can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination, M.P.E.P. § 2143.01. Nothing has been identified in the applied art that would motivate one of ordinary skill in the art to pursue folding the optical path of light reflected from the internal test pattern 18 to the pickup arrangement 5 in *Breimer* for reducing the size of its camera, particularly when, as described above, it is not readily clear if/how such folding of the optical path of light would even be successful in so reducing the size of the camera.

In view of the above, proper motivation has not been established for making the combination of *Saund*, *Breimer*, and Official Notice as applied in the Final Office Action in rejecting claim 19. As such, the rejection of claim 19 is improper.

Independent Claim 26*A. Applied Combination Fails to Teach or Suggest All Claim Elements*

Independent claim 26 recites in part “a method of calibrating a look-down digital imaging device, wherein said calibrating method does not require ever scanning a calibration area that is external to said look-down digital imaging device” (emphasis added). The Final Office Action asserts at page 5 that “Regarding claims 26 and 27 the arguments analogous to those presented for claim 1 are applicable to claims 26 and 27.” Appellant notes, however, that the above-recited limitation is present in claim 26, which is not present and claim 1. Accordingly, the rejection of claim 1 in the Final Office Action fails to address this limitation of claim 26.

The applied combination of *Saund* and *Breimer* simply fails to teach or suggest at least this limitation of claim 26. That is, *Saund* teaches a calibration technique that scans a calibration area that is external to its look-down digital imaging device. Further, *Breimer* teaches a calibration technique that requires scanning a calibration area that is external to its camera 2 (i.e., external test pattern 1). *Breimer* does not teach or suggest that the scanning of the external calibration area can be eliminated. *Breimer* teaches at col. 2, lines 38-43:

For each lens system, a setup with the external and internal test patterns needs to be performed only once, and the associated lens memory is loaded with the correction difference information. Thereafter during use of the camera only the internal test pattern in the camera is required for setup.

Thus, *Breimer* teaching a calibration technique in which scanning an external calibration area may only be required to be performed once for each lens system. However, *Breimer* fails to teach or suggest a calibration method that “does not require ever scanning a calibration area that is external to said look-down digital imaging device” (emphasis added), as recited by claim 26. Indeed, *Breimer* teaches a process in which the correction information associated with the internal test pattern is subtracted from the correction information associated with the external test pattern, and the resulting correction difference information is stored. Thus, both the external and internal scans are needed to be performed in *Breimer*.

In view of the above, neither *Saund* nor *Breimer* teach or suggest the above-identified element of independent claim 26. That is, neither *Saund* nor *Breimer* teach or suggest a calibrating method that does not require ever scanning a calibration area that is external to the imaging device. As such, the applied combination of *Saund* and *Breimer* fails to teach or suggest at least the above-identified element of independent claim 26. Therefore, Appellant respectfully asserts that independent claim 26 is patentable over the applied combination.

Claim 27

Dependent claim 27 depends from independent claim 26, and thus inherits the elements of claim 26. As such, claim 27 is patentable at least for the reasons presented above for independent claim 26. Additionally, claim 27 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 27 depends from claim 26, and further recites “focusing on said internal calibration area”. As described above with claim 1, the combination of *Saund* and *Breimer* fails to teach or suggest this element of claim 26. That is, the combination of *Saund* and *Breimer* fails to teach or suggest focusing on an internal calibration area.

In view of the above, Appellant respectfully submits that claim 27 is not obvious under 35 U.S.C. § 103(a) over the applied combination of *Saund* and *Breimer* because the applied combination fails to teach or suggest all elements of claim 27.

B. Rejections Under 35 U.S.C. § 103(a) over *Saund* in view of *Breimer* and the Specification of the Present Application

Claims 6 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Saund* in view of *Breimer* and further in view of page 3, lines 8-21 of the specification of the present application. Appellant respectfully traverses these rejections, as discussed further below.

Claim 6

Dependent claim 6 depends from independent claim 1, and thus inherits the elements of claim 1. As such, claim 6 is patentable at least for the reasons presented above for independent claim 1. Additionally, claim 6 includes further elements that overcome the rejection thereof, as discussed below.

A. Applied Combination Fails to Teach or Suggest All Claim Elements

Claim 6 depends from independent claim 1 and further recites “wherein said adjusting step comprises at least one adjustment type selected from the group consisting of:

- adjusting imaging hardware of said look-down digital imaging device;
- adjusting imaging software of said look-down digital imaging device; and
- adjusting imaging software of a computer device to which said look-down digital imaging device is coupled.”

The Final Office Action concedes that neither *Saund* nor *Breimer* teach or suggest the recited elements of claim 6, *see* page 5 of Final Office Action. However, the Final Office Action asserts that page 3, lines 8-21 of the specification of the present application discloses these elements of claim 6. The Final Office Action asserts that page 3, lines 8-21 provides an admission of these elements of claim 6 as being prior art. Thus, the Final Office Action concludes that the combination of *Saund*, *Breimer*, and page 3, lines 8-21 of the specification of the present application teaches or suggests the elements of claim 6. Applicant respectfully disagrees, as discussed below.

First, page 3, lines 8-21 of the specification of the present application address adjustments that may be made during calibration of a flatbed scanner. The specification goes on to explain at page 4, lines 8-12 that look-down digital imaging devices of the prior art do not include such calibration mechanisms as have been included in flatbed scanners. Thus, the portion of the specification of the present application upon which the Final Office Action relies addresses calibration techniques used in flatbed scanners, which the specification itself goes on to explain are not provided in look-down digital imaging scanners. Accordingly, the specification of the present application provides no admission by Applicant of prior art regarding adjustments made through calibrating a look-down digital imaging device.

Further, the adjusting step to which claim 6 refers appears in claim 1, which recites that the adjusting is “based on said analysis of said captured image data for said calibration area”. Claim 1 further recites that the calibration area is “within” the look-down digital imaging device, and as discussed above with claim 1, it further recites “focusing” on the calibration area. Thus, even if the adjusting techniques identified at page 3, lines 8-21 of the present application as being known for flatbed scanners were combined with *Saund* and *Breimer*, all elements of claim 6 are still not taught or suggested, as neither page 3, lines 8-21 of the present application, *Saund*, nor *Breimer* teaches or suggests performing such adjustments based on analysis of captured image data for a calibration area located within a look-down digital imaging device. The teaching of performing such adjustments based on analysis of captured image data for a calibration area located within a look-down digital imaging device is provided by the present application, not the applied prior art.

Thus, the applied combination fails to teach or suggest all elements of claim 6, and claim 6 is therefore not obvious under 35 U.S.C. § 103(a) over the applied combination.

B. Lack of Motivation to Combine References

Further, as mentioned above, to make a proper 35 U.S.C. § 103(a) rejection there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify a reference or to combine reference teachings, and it is the Examiner’s initial burden to provide some suggestion or motivation. *See* M.P.E.P. § 2142. Further, the motivation must be provided by the prior art, not by Applicant’s disclosure. Relying on Applicant’s disclosure for piecing together the combination is impermissible hindsight. M.P.E.P. § 2143.01.

In rejecting claim 6, the Final Office Action concedes that neither *Saund* nor *Breimer* discloses the elements of claim 6, but asserts that page 3, lines 8-21 of the present application provides an admission of these elements as prior art; and the Final Office Action thus concludes “Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to include the adjustment features described [at page 3, lines 8-21 of the present application] in combination of *Saund* and *Breimer*’s device, for proper calibration and adjustment of the device.” Page 5 of the Final Office Action. This line of logic does not identify proper motivation for combining *Saund* and *Breimer* with the teaching

of page 3, lines 8-21 of the present application. Rather, this is simply a statement that it would be obvious to combine the teachings because such a combination can be made. It is well settled that the mere fact that references can be combined is not sufficient to establish a prima facie case of obviousness, M.P.E.P. § 2143.01.

Further, the language of the recited motivation is circular in nature, stating that it is obvious to make the combination because it is obvious to achieve the result. In other words, the recited motivation states that it is obvious to combine the device of *Saund* and *Breimer* with the teaching of page 3, lines 8-21 concerning adjustments made to a flatbed scanner because such a combination would result in “proper calibration and adjustment of the device”. Such a statement can always be made for any combination (i.e., it is obvious to combine the references because it would result in the combination). However, this fails to identify any motivation (or desire) that would lead one of ordinary skill in the art to make such a combination. That is, the recited motivation fails to identify any motivation for obtaining the resultant combination.

The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination, M.P.E.P. § 2143.01. No teaching or suggestion has been identified by the Final Office Action that would lead one of ordinary skill in the art to attempt to combine the types of adjustments made when calibrating a flatbed scanner into a look-down digital imaging device. Many aspects of the operations of flatbed scanners and look-down digital imaging devices are quite different. For instance, flatbed scanners perform scanning operations within a relatively controlled/closed environment. That is, a document is placed within a flatbed scanner, and the scanner has great control over the lighting and other aspects to be used in scanning the document. Whereas, look-down digital imaging devices are used to scan documents that are placed below them, and thus do not have a closed environment for controlling the imaging of such documents. Because the environments are different for flatbed scanners than for look-down digital imaging devices (e.g., closed versus open environments), it is unclear whether the same type of adjustments made for calibrating a flatbed scanner would be appropriate for a look-down digital imaging device. That is, without some motivation in the prior art regarding whether the same type of calibration adjustments made for flatbed scanners would likely be successful in calibrating a look-down

digital imaging device, insufficient motivation exists for one of ordinary skill in the art to pursue the combination suggested by the Final Office Action, as success of such combination (i.e., using the same calibration adjustments proposed for flatbed scanners in calibrating a look-down digital imaging device) would be merely speculative.

Thus, the current Office Action fails to identify proper motivation for making the applied combination, as the motivation must establish the desirability for making the combination. Rather, it appears that the motivation is provided by the disclosure of the present application. The motivation must be provided by the prior art, not by Applicant's disclosure. Relying on Applicant's disclosure for piecing together the combination is impermissible hindsight. M.P.E.P. § 2143.01.

In view of the above, proper motivation has not been established for making the combination of *Saund*, *Breimer*, and the teaching of page 3, lines 8-21 of the present application in rejecting claim 6. As such, the rejection of claim 6 is improper.

Claim 20

Dependent claim 20 depends from independent claim 15, and thus inherits the elements of claim 15. As such, claim 20 is patentable at least for the reasons presented above for independent claim 15.

VIII. CLAIMS

A copy of the claims 1, 3, 4, 6-8, 10, 11, 13-22, 24, 26, and 27 involved in the present appeal is attached hereto as Appendix A. As indicated above, the claims in Appendix A do not include the amendment to claim 15 presented in the Amendment After Final Rejection filed by Applicant, but do incorporate any amendments presented in the Amendment in Response to Non-Final Office Action submitted by Applicant April 14, 2004.

IX. EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

X. RELATED PROCEEDINGS

No related proceedings are referenced in II. above, or copies of decisions in related proceedings are not provided, hence no Appendix is included.

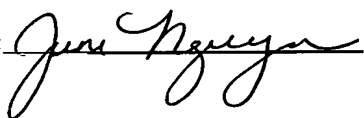
The required fee for this response is enclosed. If any additional fee is due, please charge Deposit Account No. 08-2025, under Order No. 10001227-1 from which the undersigned is authorized to draw.

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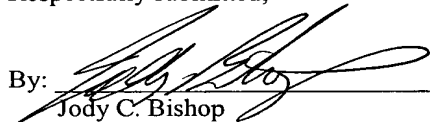
Typed Name: June Nguyen

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APPENDIX A

Claims Involved in the Appeal of Application Serial No. 09/626,625

1. A method of calibrating a look-down digital imaging device, said method comprising:
 - focusing on a calibration area within said look-down digital imaging device;
 - scanning said calibration area within said look-down digital imaging device to capture image data for said calibration area;
 - analyzing said captured image data for said calibration area; and
 - adjusting the imaging of said look-down digital imaging device based on said analysis of said captured image data for said calibration area.
3. The method of claim 1 wherein said focusing further comprises:
 - folding the optical path of light reflected from said calibration area for said scanning of said calibration area.
4. The method of claim 1 further comprising:
 - illuminating said calibration area during said scanning step.
6. The method of claim 1 wherein said adjusting step comprises at least one adjustment type selected from the group consisting of:
 - adjusting imaging hardware of said look-down digital imaging device;
 - adjusting imaging software of said look-down digital imaging device; and
 - adjusting imaging software of a computer device to which said look-down digital imaging device is coupled.
7. A look-down digital imaging device comprising:
 - calibration area arranged within said look-down digital imaging device, wherein said look-down digital imaging device is operable to scan said calibration area for calibration of said look-down digital imaging device, and wherein said look-down digital imaging device is operable to achieve an in-focus scan of said calibration area for calibration of said look-down digital imaging device.

8. The look-down digital imaging device of claim 7 further comprising a scan head.

10. The look-down digital imaging device of claim 8 wherein said scan head includes:

sensor for imaging an original image placed substantially below said look-down digital imaging device; and

lens for focusing reflected light from said original to said sensor.

11. The look-down digital imaging device of claim 10 wherein said sensor is a linear sensor.

13. The look-down digital imaging device of claim 7 wherein the optical path of light reflected from said calibration area during a scan of said calibration area is folded.

14. The look-down digital imaging device of claim 13 further comprising:
at least one mirror for folding the optical path of light reflected from said calibration area.

15. A system for performing digital imaging comprising:
a look-down digital imaging device that includes means for imaging a target scan area and means for calibrating said look-down digital imaging device, wherein the calibrating means uses a calibration path that mimics an imaging path to be used by said look-down digital imaging device for imaging said target scan area.

16. The system of claim 15 wherein said means for imaging includes a high resolution linear sensor.

17. The system of claim 15 wherein said means for calibrating includes a calibration area within said look-down digital imaging device.

18. The system of claim 17 wherein said means for calibrating further includes means for focusing said imaging means on said calibration area.

19. The system of claim 17 wherein said means for calibrating further includes means for folding the optical path of light reflected from said calibration area.

20. The system of claim 15 further comprising a computer device to which said look-down digital imaging device is coupled.

21. The method of claim 1 further comprising:
determining an in-focus imaging path for imaging an object with said look-down digital imaging device, wherein said focusing on said calibration area mimics said in-focus imaging path.

22. The method of claim 1 further comprising:
determining length of an image path to be used for said look-down imaging an external object, wherein said focusing on said calibration area comprises adjusting a calibration path used for said scanning of said calibration area to correspond to the length of the image path.

24. The look-down digital imaging device of claim 7 wherein said in-focus scan of said calibration uses a calibration path that mimics an in-focus imaging path for scanning an external object.

26. A method of calibrating a look-down digital imaging device, wherein said calibrating method does not require ever scanning a calibration area that is external to said look-down digital imaging device, said method comprising:

scanning an internal calibration area of said look-down digital imaging device to capture image data for said internal calibration area;

analyzing said captured image data for said internal calibration area; and

adjusting the imaging of said look-down digital imaging device based on said analysis of said captured image data for said internal calibration area.

27. The method of claim 26 further comprising:
focusing on said internal calibration area.